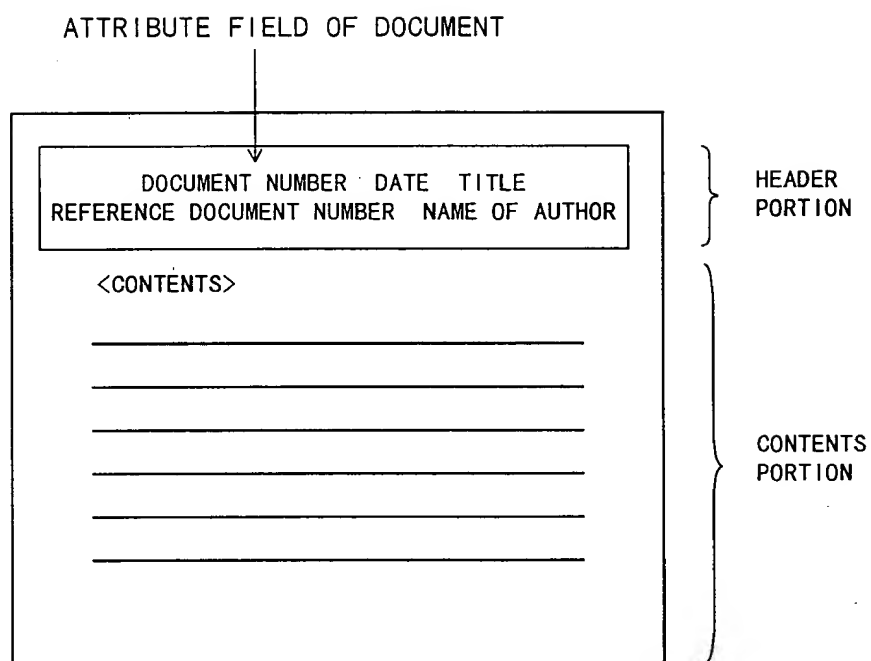


FIG. 1

09040026 032698
869270 92084050



F I G. 2

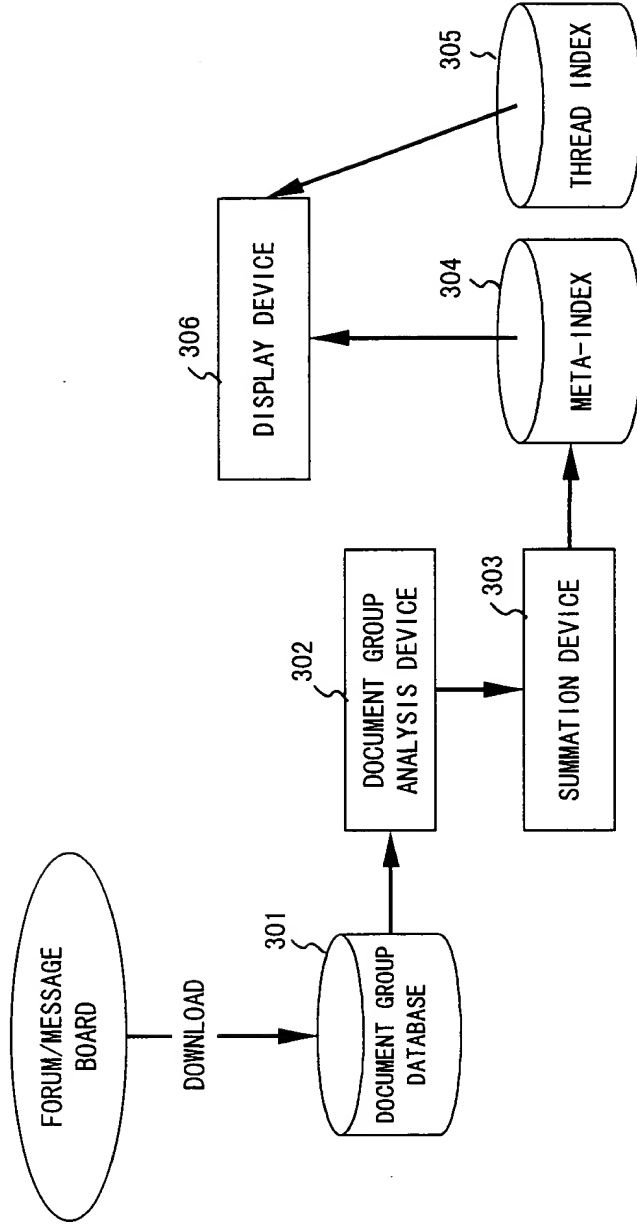


FIG. 3

09043025 032599

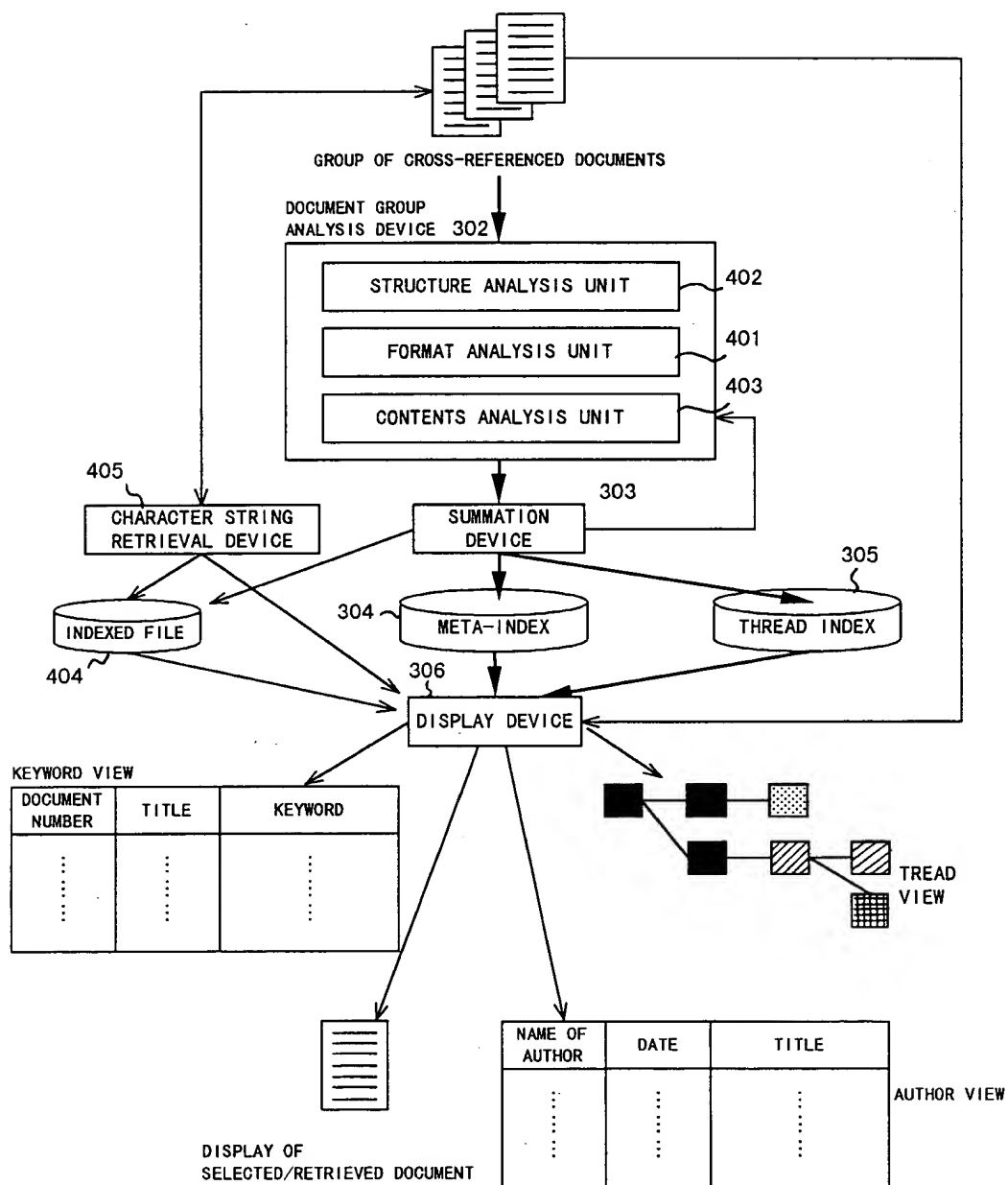
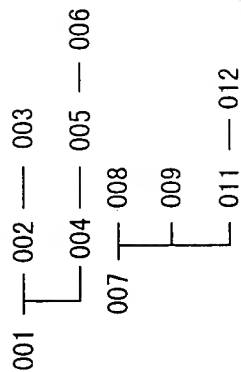


FIG. 4

DOCUMENT NUMBER	REFERENCE DOCUMENT NUMBER	TITLE	NAME OF AUTHOR	KEYWORD	NUMBER OF LINES	COLOR NUMBER	DATE
:	:	:	:	:	:	:	:
004	001	TELL ME	UCHINO	-----	12	4	96/10/05
005	004	Re: TELL ME	TSUDA	-----	45	4	96/10/08
006	005	APPLICATION OF Java	UCHINO	-----	80	6	96/10/15
*007	-----	DEFECTIVE HD?	MATSUI	SunOS, HD, 64MB, FORMAT	12	1	96/10/18
:	:	:	:	:	:	:	:

* INDICATES ROOT DOCUMENT NUMBER

ROOT DOCUMENT NUMBER	NUMBER OF DOCUMENTS	STRUCTURE OF THREAD
⋮		
001	6	(001 (002 003) (004 (005 006)))
007	5	(007 008 009 (011 012))
⋮		



MEANING OF LISTING: (PARENT DOCUMENT NUMBER CHILD DOCUMENT NUMBER/SUB-TREE CHILD DOCUMENT NUMBER/SUB-TREE)

FIG. 6

INDEXED WORD	KEYWORD CONTAINING INDEXED WORD	THREAD NUMBER*
INTERNET	•STARTING INTERNET	00496
	•CONNECTION TO INTERNET	00218
CONTROL	•CONTROL PANEL	00518
DOMAIN	•DOMAIN NAME SERVER	00128
	•DOMAIN IN NATION	00476
⋮	⋮	⋮

FIG. 7

```

graph TD
    START([START]) --> 801[READING ONE LINE OF DOCUMENT FILE]
    801 --> 802{HEADER PORTION?}
    802 -- Yes --> 803[EXTRACTING DOCUMENT  
NUMBER, TITLE, NAME  
OF AUTHOR, DATE, AND  
REFERENCE DOCUMENT  
NUMBER]
    802 -- No --> 804[ENTERING DOCUMENT  
NUMBER, TITLE, NAME OF  
AUTHOR, DATE, AND  
REFERENCE DOCUMENT  
NUMBER IN META-INDEX]
    803 --> 805[READING ONE LINE OF DOCUMENT FILE]
    804 --> 805
    805 --> 806{EOF?}
    806 -- No --> 807[COUNTING NUMBER OF  
LINES IN CONTENTS  
PORTION]
    806 -- Yes --> 808[ENTERING COUNTED NUMBER  
OF LINES IN META-INDEX]
    807 --> 805
    808 --> 809[ENTERING DOCUMENT  
NUMBER IN THREAD INDEX]
    809 --> 810[ENTERING COLOR NUMBER  
IN META-INDEX]
    810 --> END([END])
  
```

A


```

graph TD
    START([START]) --> 901{ROOT DOCUMENT?}
    901 -- No --> 903{IS LIST HAVING REFERENCE DOCUMENT NUMBER AS PARENT DOCUMENT NUMBER EXISTING?}
    901 -- Yes --> 902[MAKING ENTRIES]
    902 --> 903
    903 -- Yes --> 905[ENTERING CURRENT DOCUMENT NUMBER AS CHILD DOCUMENT NUMBER OF LIST HAVING REFERENCE DOCUMENT NUMBER AS PARENT DOCUMENT NUMBER]
    903 -- No --> 904[GENERATING LIST HAVING REFERENCE DOCUMENT NUMBER AS PARENT DOCUMENT NUMBER]
    904 --> 905
    905 --> 906[UPDATING NUMBER OF DOCUMENT]
    906 --> RETURN([RETURN])

```

RETURN

0304002 03239
0304002 03239

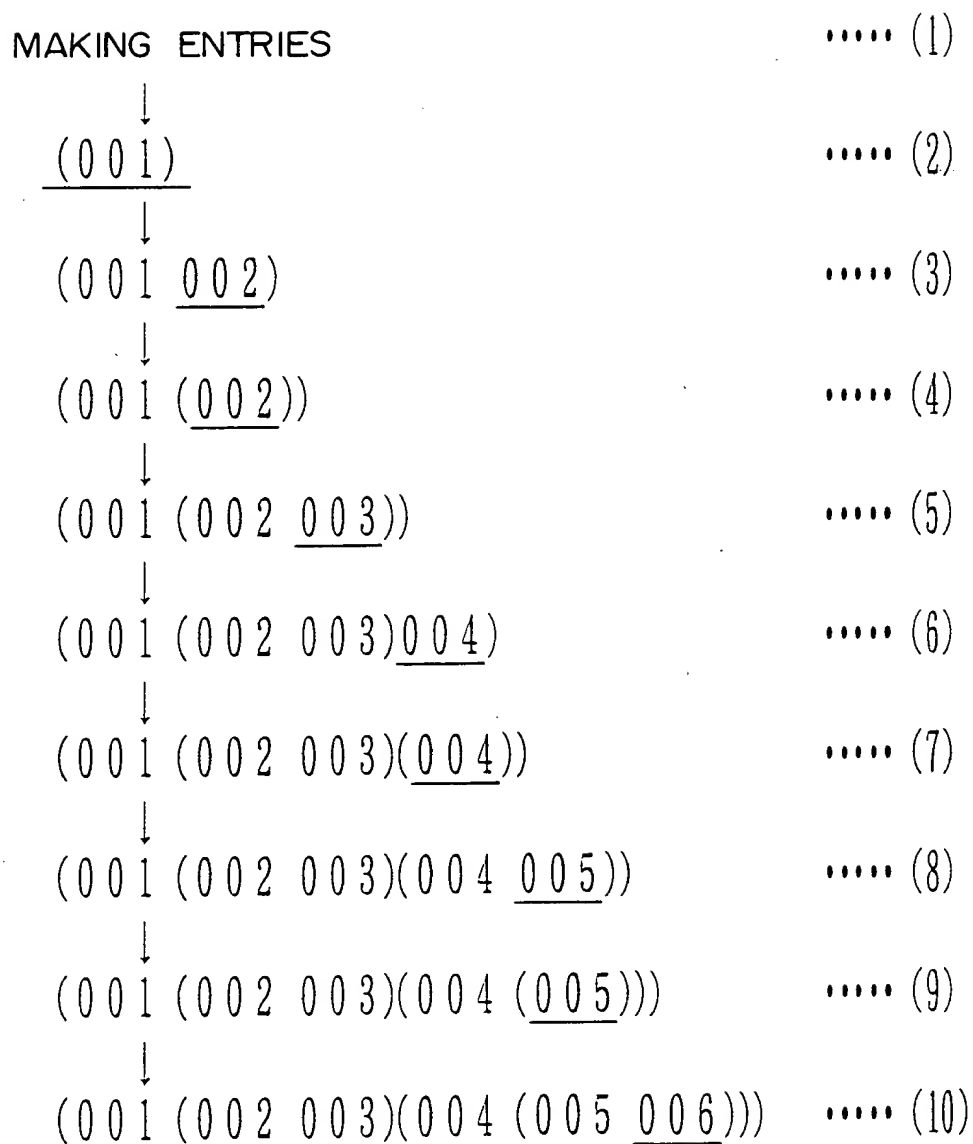


FIG. 10

```

graph TD
    START([START]) --> 1101{ROOT DOCUMENT?}
    1101 -- Yes --> 1102[ENTERING ENTRY OF ROOT DOCUMENT NUMBER IN COLOR TABLE]
    1101 -- No --> 1104{DOES TITLE CONTAIN REFERENCE CODE?}
    1102 --> 1103[ENTERING INITIAL COLOR NUMBER]
    1103 --> 1104
    1104 -- Yes --> 1105[DELETING REFERENCE CODE FROM TITLE]
    1104 -- No --> 1106{IS SAME TITLE ENTERED IN SAME THREAD IN COLOR TABLE?}
    1105 --> 1106
    1106 -- Yes --> 1107[ENTERING DOCUMENT NUMBER IN ENTRY HAVING SAME TITLE ENTERED IN SAME THREAD IN COLOR TABLE]
    1106 -- No --> 1108[GENERATING ENTRY IN SAME THREAD IN COLOR TABLE]
    1107 --> 1110[ENTERING COLOR NUMBER IN ENTRY CORRESPONDING TO DOCUMENT NUMBER IN META-INDEX]
    1108 --> 1109[ENTERING NEW COLOR NUMBER, DOCUMENT TITLE, AND DOCUMENT NUMBER IN GENERATED ENTRY]
    1109 --> 1110
    1110 --> RETURN([RETURN])

```

FIG. 11

[illegible]

ROOT DOCUMENT NUMBER	COLOR NUMBER	TITLE	DOCUMENT NUMBER
:	:	:	:
001	#1	(MAIN TOPIC)	001, 002, 004
	#2	(SUB-TOPIC 1)	003
	#3	(SUB-TOPIC 2)	005, 006
:	:	:	:

FIG. 12

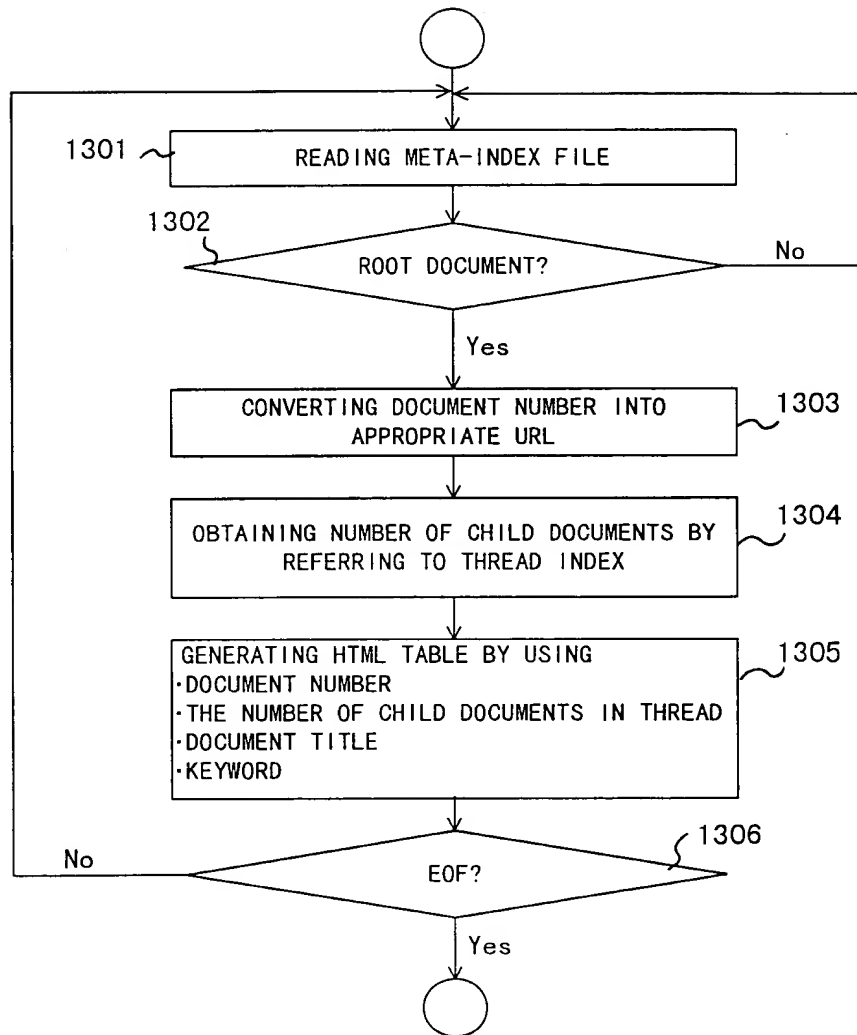


FIG. 13

```
graph TD; Start(( )) --> 1401[READING THREAD INDEX FILE]; 1401 --> 1402[RESTORING TREE STRUCTURE (ARRAY) FROM LIST]; 1402 --> 1403[EXTRACTING NAME OF AUTHOR OF CORRESPONDING DOCUMENT, NUMBER OF LINES, COLOR NUMBER, AND TITLE FROM META-INDEX]; 1403 --> 1404[DETERMINING COLOR OF TITLE TO BE WRITTEN WITH NODE BASED ON TOTAL NUMBER OF CHILD DOCUMENTS AND COLOR NUMBER]; 1404 --> 1405[DISPLAYING SERIES OF TITLES OF DOCUMENTS IN THREAD]; 1405 --> 1406[DISPLAY OF TREE<br/>• CONVERTING NODE INTO FIRST ONE CHARACTER (TWO HALF-WIDTH CHARACTERS) OF AUTHOR AND NUMBER OF LINES OF CONTENTS<br/>• DISPLAYING DATA AFTER SEQUENTIALLY CONVERTING DATA FROM LEFTMOST CHARACTER IN ARRAY INTO NODE (USING < PRE > TAG FUNCTION OF HTML)]; 1406 --> 1407{EOF?}; 1407 -- Yes --> End(( )); 1407 -- No --> 1401;
```

The flowchart illustrates a process for displaying a tree structure of documents. It begins with a start node (circle) leading to a process box labeled 1401: "READING THREAD INDEX FILE". This is followed by box 1402: "RESTORING TREE STRUCTURE (ARRAY) FROM LIST". Then, box 1403: "EXTRACTING NAME OF AUTHOR OF CORRESPONDING DOCUMENT, NUMBER OF LINES, COLOR NUMBER, AND TITLE FROM META-INDEX". Next is box 1404: "DETERMINING COLOR OF TITLE TO BE WRITTEN WITH NODE BASED ON TOTAL NUMBER OF CHILD DOCUMENTS AND COLOR NUMBER". This leads to box 1405: "DISPLAYING SERIES OF TITLES OF DOCUMENTS IN THREAD". The next step is box 1406: "DISPLAY OF TREE", which includes two sub-steps: "• CONVERTING NODE INTO FIRST ONE CHARACTER (TWO HALF-WIDTH CHARACTERS) OF AUTHOR AND NUMBER OF LINES OF CONTENTS" and "• DISPLAYING DATA AFTER SEQUENTIALLY CONVERTING DATA FROM LEFTMOST CHARACTER IN ARRAY INTO NODE (USING < PRE > TAG FUNCTION OF HTML)". This box is also labeled with a reference numeral 1406. The process then reaches a decision diamond labeled 1407: "EOF?". If the answer is "Yes", the flow ends at a terminal node (circle). If the answer is "No", the flow loops back to the start of the "READING THREAD INDEX FILE" step (box 1401).

FIG. 14

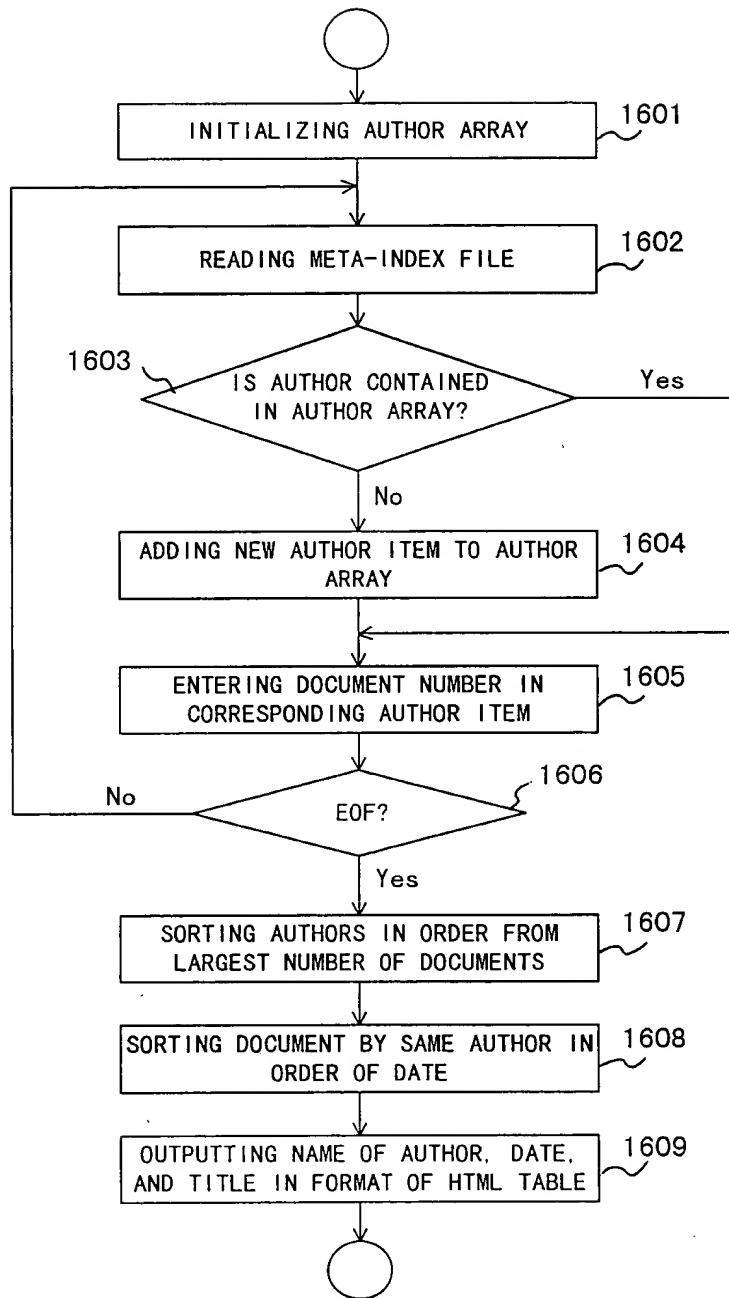


FIG. 16

05048026 032698

EXAMPLE OF AUTHOR ARRAY

AUTHOR A	001, 005, 007, 008
AUTHOR B	011, 012, 013
AUTHOR C	003, 009, 010
AUTHOR D	004, 006
AUTHOR E	002

F I G. 1 7

```

graph TD
    Start(( )) --> 1801[READING DOCUMENT NUMBER]
    1801 --> 1802[READING DOCUMENT FILE]
    1802 --> 1803{DOES HEADER PORTION  
CONTAIN DOCUMENT  
NUMBER?}
    1803 -- No --> 1801
    1803 -- Yes --> 1804{IS URL CONTAINED?}
    1804 -- No --> 1805[CONVERTING INTO FORMAT OF ANCHOR  
TAG]
    1804 -- Yes --> 1805
    1805 --> 1806{COMMENT LINE?}
    1806 -- No --> 1808[OUTPUTTING ONE LINE  
(HTML FORMAT)]
    1806 -- Yes --> 1807[ADDING TAG FOR COLOR CHANGE]
    1807 --> 1808
    1808 --> 1809{HEADER PORTION OF  
NEW DOCUMENT?}
    1809 -- No --> 1801
    1809 -- Yes --> 1810[GENERATING AND DISPLAYING TREE FROM THREAD  
INDEX]
    1810 --> End(( ))
  
```

FIG. 18

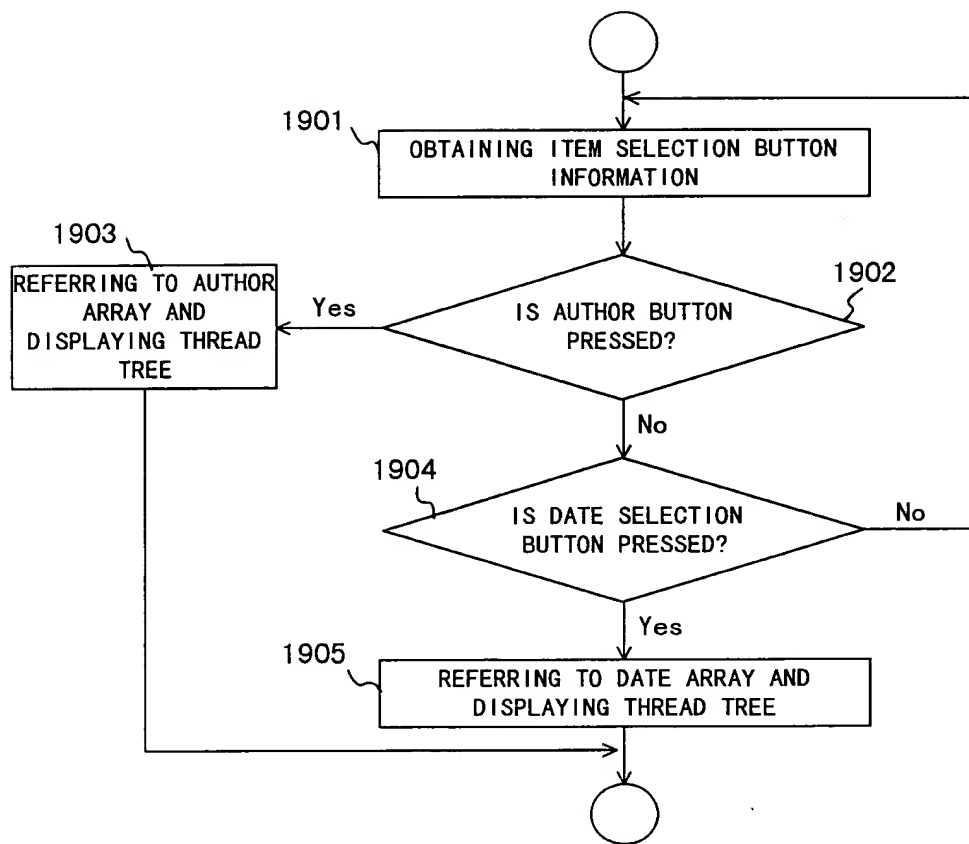


FIG. 19

EXAMPLE OF AUTHOR ARRAY

AUTHOR A	001, 005, 007, 008	→ YELLOW
AUTHOR B	011, 012, 013	→ BLACK
AUTHOR C	003, 009, 010	→ RED
AUTHOR D	004, 006	→ BLUE
AUTHOR E	002	→ GREEN

FIG. 20A

EXAMPLE OF DATE ARRAY

97/04/15	001, 002, 003, 004	→ YELLOW
97/04/21	005, 006	→ BLACK
97/04/28	007, 008, 009	→ RED
97/05/25	010	→ BLUE
97/05/26	011, 012, 013, 014, 015	→ GREEN

FIG. 20B

09043036 0369 92084050

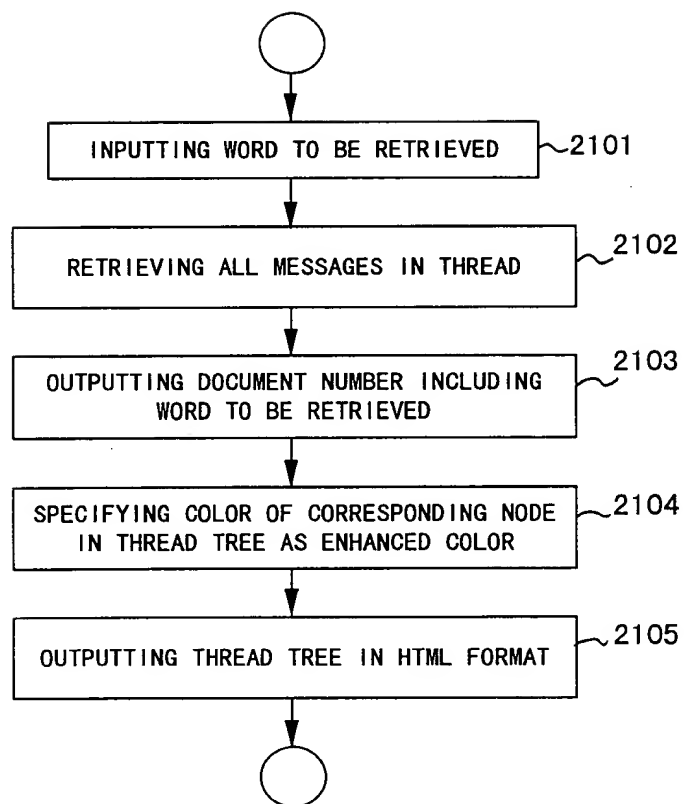


FIG. 21

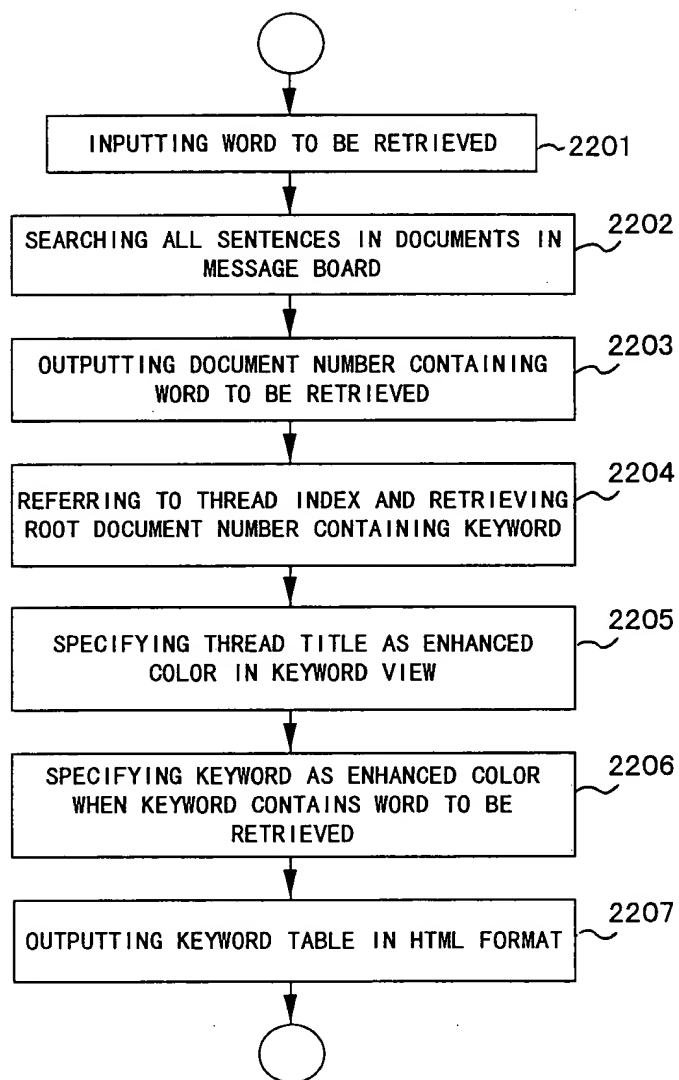


FIG. 22

2025-03-26 09:26:00

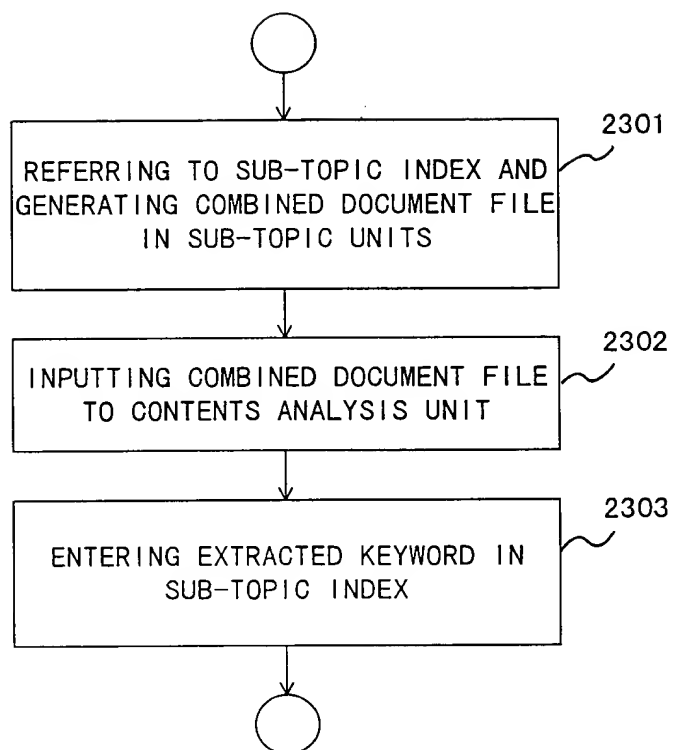


FIG. 23

86920" 22084060

ROOT DOCUMENT NUMBER	COLOR NUMBER	TITLE	MESSAGE NUMBER	KEYWORD
∴	∴	∴	∴	∴
001	#1	(MAIN TOPIC)	001, 002, 004
	#2	(SUB-TOPIC 1)	003
	#3	(SUB-TOPIC 2)	005, 006
∴	∴	∴	∴	∴

FIG. 24

KEYWORD VIEW OF fgal_internet_QA

【THREAD VIEW】		【SENDER VIEW】	
ID		TITLE	KEYWORD
00001	<input type="checkbox"/> 1	PREFACE	CONTENTS OF QUESTIONS / THIS MESSAGE BOARD / TITLE OF MESSAGE / Internet / RELEVANT QUESTIONS AND ANSWERS / CONNECTION TYPE / ENVIRONMENT FOR ... (HARDWARE / APPROPRIATE ADVICE FOR CONTENTS / BABA / INABA / Manager
00002	<input type="checkbox"/> 3	MINIMAL HARDWARE	NET SURFING LATELY IN FASHION / INTERNET / DEFACT STANDARD NETSCAPE NAVIGATOR / PENTIUM MACHINE / THIS WAY / PC COMMUNICATION IF ... / PROVISIONS OF LAW / VARIOUS SERVICES / Worldtalk OF People / MAD!
00005	<input type="checkbox"/> 3	QUESTION: CANNOT BE CONNECTED TO HOMEPAGE	PROVIDER / CONFIRMATION OF PASSWORD / APPLICABLE MODEL / SETTINGS / DEFAULT OF NETSCAPE / DIAL UP IP CONNECTION / APPLICABLE SOFTWARE / FMV*DPSP5 / USER NAME
00008	<input type="checkbox"/> 6	INTERNET START	PROVIDER / HOME PAGE / FEE / STARTING TIME OF TELEHODAI / WWW / ACCESS / ISDN / ANALOG 288 / BAUD RATE / nifty COMMAND
00014	<input type="checkbox"/> 1	THANKS EVERYBODY	PROVIDER RECOMMENDED BY REYA / IMPOSSIBLE NETWORKER / CALL TOMORROW / DISCOUNT OF GOLD FOR EMPLOYEES / SUMMARIZED ... / CHALLENGING IN MANY FIELDS / ... IN NAGOYA / ROAD55 / OTHER DAY / SUBSIDIARY
00016	<input type="checkbox"/> 24	NIFTY DIAL UP CONNECTION	@niftyserve / ISN'T IT? / SCRIPT / SubManager / or / PEOPLE FROM VENUS / NIFTYServe / INTERNET / WIZARD / kazusi
00016	<input type="checkbox"/> 1	SELECTING PROVIDER	IMPOSSIBLE NETWORKER / ONLINE SI... / RECOMMENDED BY REYA / SETTING HOME PAGE / REQUEST FOR MATERIAL / ... UP / FIXED FEE / EXTENT RELIABLE / RATHER HARD / ALLESNET
00030	<input type="checkbox"/> 9	PROVIDER ... BAUD RATE BETWEEN HOME PC	SERVER-SERVER HOME PC / @niftyserve / PROXI... / T*K / ping / MNP5 / CACHE FOR LOWER LAYER / SubManager / PEOPLE FROM VENUS / MODEM COMMAND
00040	<input type="checkbox"/> 24	NIF CONNECTION MAIL	INTERNET MAIL/ @niftyserve / SubManager / or / BABA / INABA / PEOPLE FROM VENUS / NIF-CONNECTED MEMBER / NIFTYServe / IN SERVICE / kazusi

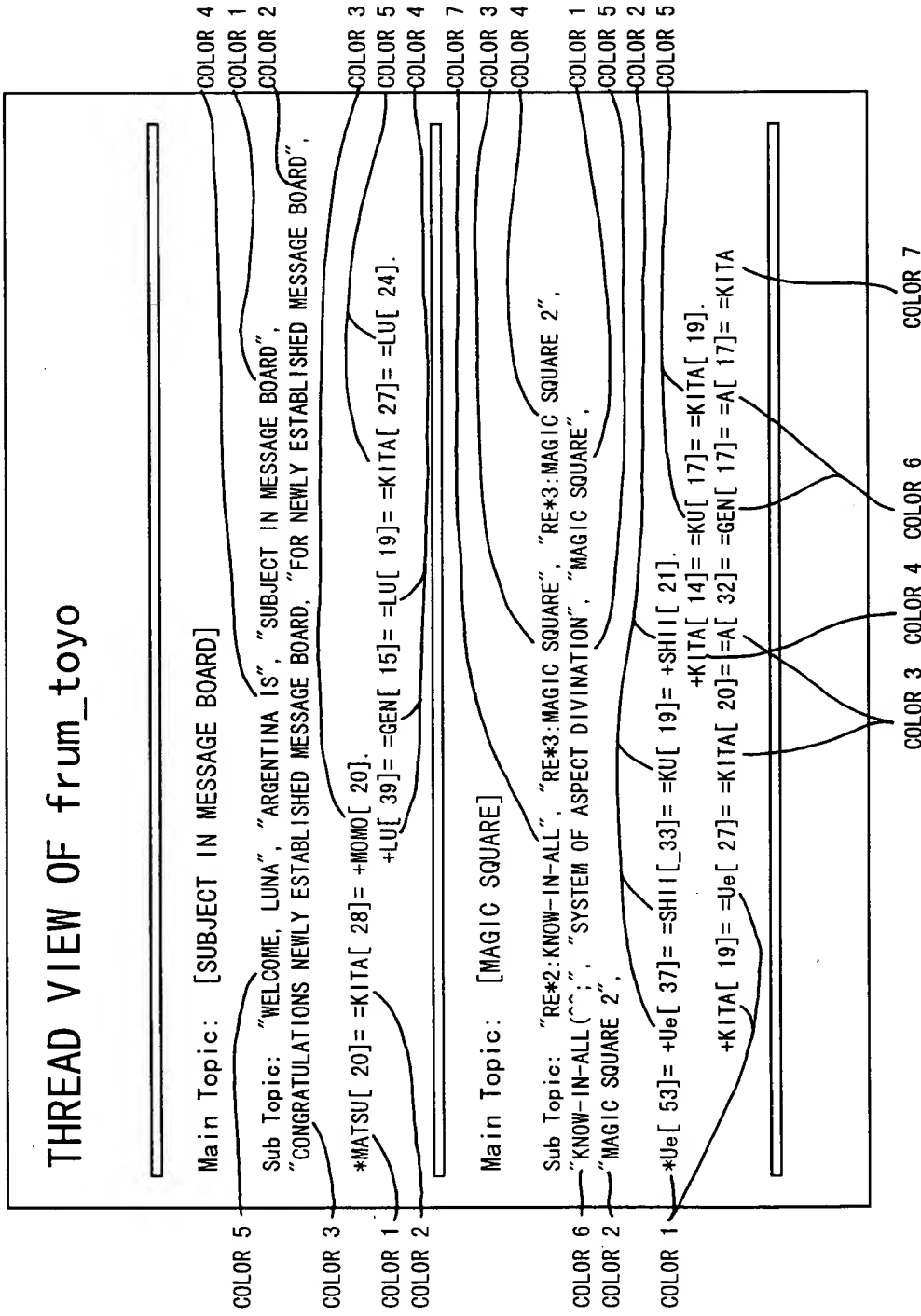


FIG. 26

		8: [RE^4: DOES ANYBODY KNOW SANYNET?]
MURA	SEPTEMBER	11: [Admin AUTHORIZATION FOR RE>NT] 30: [QuickTime WITH NESUKE3.0iβ6]
	OCTOBER	1: [RE^2: QuickTime WITH NESUKE 3.0iβ6] [RE>NN3Jaβ CANNOT BE INSTALLED] 2: [RE>QuickTime WITH NESUKE 3.0iβ6] [RE>QuickTime WITH NESUKE 3.0iβ6]
KANCHAN	JULY	25: [WANT TO RED news WITH 98+DOS] 27: [WANT TO RED news WITH RE: 98+DOS]
	SEPTEMBER	29: [ABOUT EXTENSION rar] [RE: MAIL WITH NO SENDER NAME] 30 [RE: ABOUT EXTENSION rar]
	OCTOBER	1 [RE: ABOUT EXTENSION rar]
YOSHI CHAN	MAY	6: [RE^1: NIFTY DIAL UP CONNECTION] 18: [RE^5: NIFTY DIAL UP CONNECTION]
	AUGUST	5: [RE^2: DOES ANYBODY KNOW SANYNET?] 6: [RE^3: DOES ANYBODY KNOW SANYNET?]
OSAMU ARAKI	AUGUST	3: [PRIMARY QUESTION ABOUT ActiveX] 8: [RE: PRIMARY QUESTION ABOUT ActiveX] 31: [IE3 FORMAL VERSION TROUBLE]
	SEPTEMBER	2: [RE: IE3 FORMAL VERSION TROUBLE] 3: [RE: IE3 FORMAL VERSION TROUBLE]
TOSHIHIRO SAKAWA	SEPTEMBER	9: [CANNOT BE CONNECTED TO INTERNET (2)] 14: [CANNOT BE CONNECTED TO INTERNET (2)] 15: [RE:RE^2: CANNOT BE CONNECTED TO INTERNET (2)] 16: [RE:COMMON CONNECTION METHOD]
Mue	AUGUST	4: [RE: QUESTION HOW CAN HOME PAGE BE PRINTED ...] 18: [RE: PPP COMPARISON BETWEEN Hyper Road AND Road4] 25: [RE: ABOUT INET SETUP WIZARD]
SADAYUKI ANDO	JULY	27: [FELL IN TROUBLE SOS!] 28: [RE: FELL IN TROUBLE SOS!] 30: [RE: FELL IN TROUBLE SOS!]
N-DATE.	AUGUST	18: [ABOUT RealAudio PLUG IN] 19: [RE: ABOUT RealAudio PLUG IN] 25: [RE: ABOUT INSTALLING RealAudio]

FIG. 27

05048026 032658

PROVIDER - - - BAUD RATE BETWEEN HOME PC

00030/00524 AAA00001 AAA
(12) 96/05/10 03:02

PROVIDER - - - BAUD RATE BETWEEN HOME PC
NUMBER OF COMMENTS: 1

WHEN WE SEE Homepage, SERVER-SERVER-HOME PC CONNECTION IS TO BE MADE?
(ACTUALLY THERE MUST BE OTHER METHODS)

WHAT'S THE BAUD RATE BETWEEN SERVERS? IS IT 14400bps (IN MY CASE) SET
USING MODEM COMMAND?

SINCE DATA ARE OVERFLOWING IN MANY CASES ...

AAA (AAA00001)

THREAD

*00030= =00031= =00034= =00035= +00038= =00054.
+00066= =00067= =00068.

<<Prev - - - thread - - - Next>>

[KEYWORD VIEW] **[THREAD VIEW]** **[SENDER VIEW]**

RETRIEVAL FROM ENTIRE
MESSAGE BOARD

```

graph TD
    ISB[ITEM SELECTION BUTTON] --> AUTH[AUTHOR]
    ISB --> DATE[DATE]
    RED[RED] --> GREEN[GREEN]
    RED --> BLUE[BLUE]
    GREEN --> OP1["*UCHI[11]= + TSU [45]="]
    BLUE --> OP2["=UCHI[11]= =MATSU[65]"]
    OP1 --> OP3["+MATSU[65]= =TSU[45]"]
    OP2 --> OP3
  
```

The diagram illustrates the RED system architecture. It starts with an 'ITEM SELECTION BUTTON' which points to two boxes: 'AUTHOR' and 'DATE'. These boxes point to a central 'RED' node. From 'RED', the flow splits into two paths: 'GREEN' and 'BLUE'. The 'GREEN' path leads to the operation $*UCHI[11] = + TSU[45]$. The 'BLUE' path leads to the operation $=UCHI[11] = =MATSU[65]$. Both of these operations then point to a final operation: $+MATSU[65] = =TSU[45]$.

FIG. 29

[illegible]

SINCE DATA CAN BE SELECTED FROM A RETRIEVAL RESULT, IT IS RECOMMENDABLE NOT TO START RETRIEVAL UNDER SERVER CONDITIONS.

UNIX

NETSCAPE

INTERNET

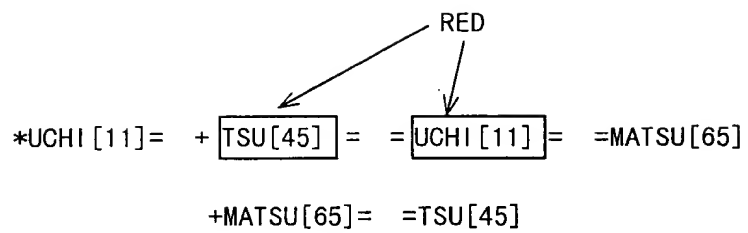
HOMEPAGE

THE UPPER OR LOWER CASE OF ALPHABETICAL CHARACTERS SHOULD/SHOULD NOT BE
DISTINGUISHED, AND BLANK CHARACTER STRING IS RETRIEVED AS IGNORED /
WITHOUT IGNORED.

RETURN TO FIRST PAGE

FIG. 30

WORD TO BE RETRIEVED: PROTOCOL



F I G. 3 1

09048026 032658
959220 92284060

[illegible][illegible][illegible][illegible]

Result: FOUND

IN THE DOCUMENT RESOURCES OF THE fgal_internet_QA MESSAGE BOARD, THERE ARE 14/518 ITEMS SATISFYING LOGIC EXPRESSION (UNIX) 8 NETSCAPE & INTERNET & HOMEPAGE.

1. 00064 : RE^2: PROTOCOL
2. 00091 : RE: chmod IS
3. 00204 : RE: TELL ME HOW TO DOWNLOAD NIF.
4. 00212 : RE^2: TELL ME HOW TO DOWNLOAD NIF.
5. 00233 : RE: RE: I HAVE GIVEN YOU INFORMATION ...
6. 00270 : RE^2:
7. 00308 : TIY
8. 00330 : RE: RE^2: TELL ME HOW TO DOWNLOAD NIF.
9. 00343 : BPULS FOR UNIX
10. 00349 : RE: PREVENTING PROCESS FROM BEING LEFT OVER
11. 00376 : RE: MONITOR CANNOT BE SEEN?
12. 00463 : RE: Q HOW CAN EXTENSION WITH taz
13. 00475 : RE^2: HOW CAN EXTENSION WITH taz
14. 00480 : RE^4: Q HOW CAN EXTENSION WITH taz

SELECTIVE RETRIEVAL

SELECTIVE RETRIEVAL CAN BE MADE BY SETTING CONDITIONS FROM THE RETRIEVAL RESULTS. CLICK THE SEARCH BUTTON WITH THE FOLLOWING CONDITIONS SPECIFIED. WHEN NEW RETRIEVAL IS STARTED, RETURN TO THE FIRST PAGE.

FIG. 33

09048025 032548

MAIN TOPIC: WHAT IS THE FIRST QUESTION?

SUB-TOPIC	KEYWORD
A OUR TEACHER ... CABLE	B UNIVERSITY C SCHOOL BUILDING START OF INTERNET
PROTOCOL	telnet ftp PROTOCOL OF UNIX MACHINE
.....

F I G. 34

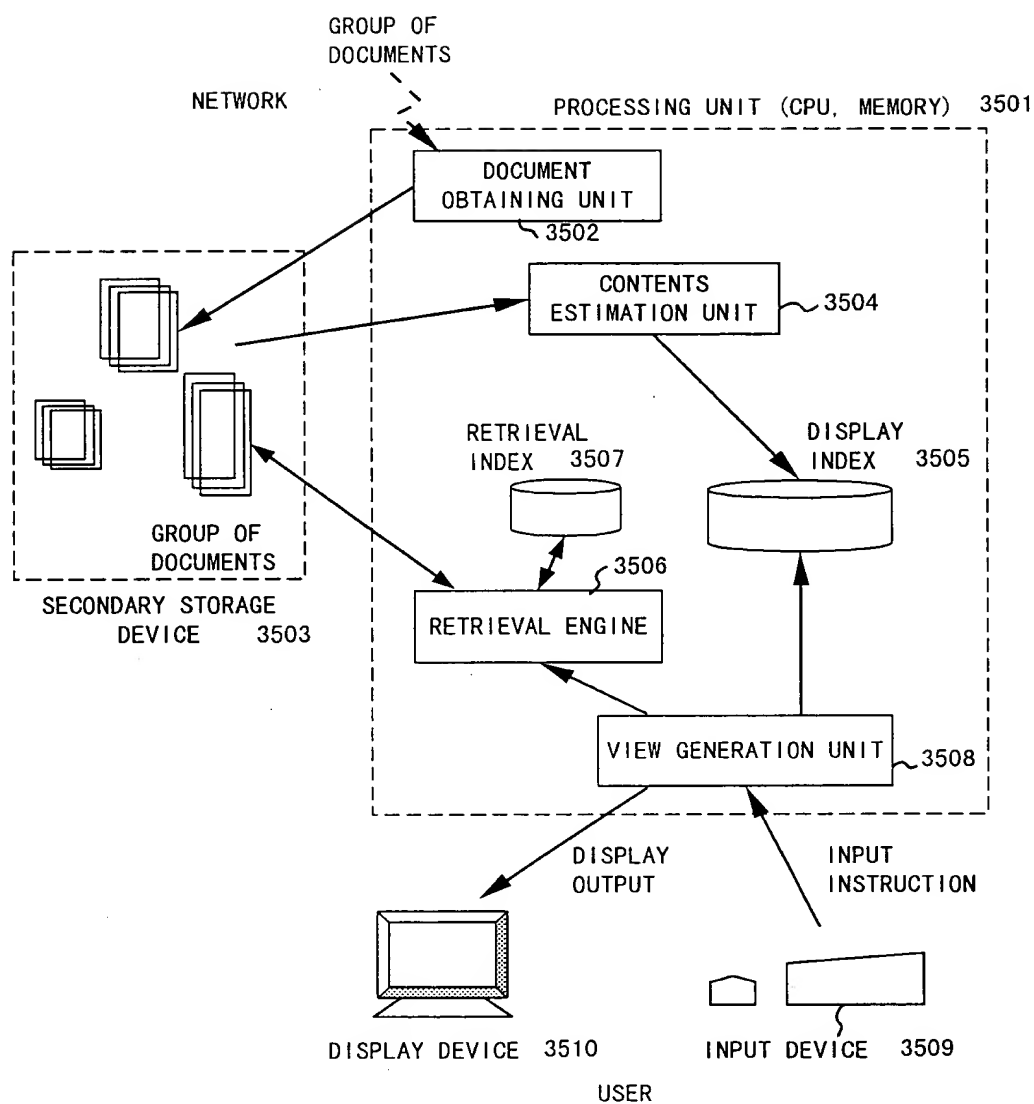


FIG. 35

0904003-034598

User ID	NAME	ABBREVIATION	NUMBER OF MESSAGES (NUMBER OF ANSWERS)
⋮	⋮	⋮	
KX001	TSUDA	TSU	51 (26)
KX002	UCHINO	UCHI	42 (24)
⋮	⋮	⋮	

F I G. 3 6

DOCUMENT ID	User ID	TITLE	DATE	NUMBER OF RELATED REFERENCES	PATH TO ROOT	IDENTIFICATION NUMBER OF TITLE	TYPE OF MESSAGE
001	AAA	SETTING OF PRINTER UNCERTAIN!	97/9/5	2	001	1	Q
002	BBB	RE: SETTING OF PRINTER UNCERTAIN!	97/9/6	1	002, 001	1	A
003	AAA	THANKS A LOT.	97/9/6	0	003, 002, 001	2	T
...	

FIG. 37

THREAD ID	TREE STRUCTURE OF THREAD	NUMBER OF DOCUMENTS	NUMBER OF AUTHORS	UID OF LARGEST NUMBER OF MESSAGES	CONTENTS LIST
⋮ ⋮ ⋮	⋮ ⋮ ⋮	⋮ ⋮ ⋮	⋮ ⋮ ⋮	⋮ ⋮ ⋮	
001	(001 (002 003) (004 (005 006)))	6	4	KX001	(0001, D002, C003)
007	(007 008 009 (011 012))	5	4	KX002	(0003, Q004)
⋮ ⋮ ⋮	⋮ ⋮ ⋮	⋮ ⋮ ⋮	⋮ ⋮ ⋮	⋮ ⋮ ⋮	

FIG. 38

QA_ID	Question	Answer	Thanks	Max AnswerUID
⋮	⋮	⋮	⋮	⋮
Q0011	001	002	003	KX001
⋮	⋮	⋮	⋮	⋮

* QA-ID IS FORMED BY CHARACTER STRING QA, THREAD ID, AND SERIAL NUMBER.

* ALL DOCUMENTS IN PATH FROM Question DOCUMENT TO Thanks DOCUMENTS ARE ENTERED AS Answer DOCUMENT.

* LARGEST NUMBER OF UIDS IN GROUP OF ANSWER DOCUMENTS ARE ENTERED AS MaxAnswerUID

FIG. 39

DS_ID	MESSAGE ID LIST	UID	Thread ID
...	...		
D0011	(001 002 003 004 005 006 007 008)	AAAA BBBB	001
...	...		

* VALUE OF DS_ID IS FORMED BY CHARACTER
STRING DS, THREAD ID, AND SERIAL NUMBER.

FIG. 40

CT_ID	Chat LIST	Thread ID
...	...	
C0011	(001 002 003 004 005 006 007 008 009)	001
...	...	

* VALUE OF CT_ID IS FORMED BY CHARACTER
STRING DS, THREAD ID, AND SERIAL NUMBER.

FIG. 41

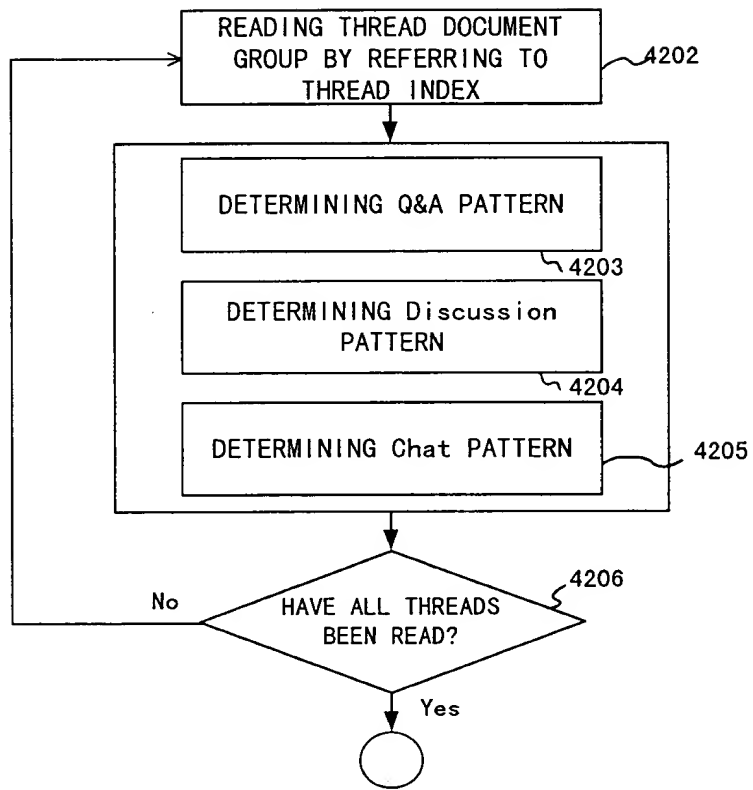


FIG. 42

```

graph TD
    Start(( )) --> 4301[REFERRING TO 'THREAD TREE STRUCTURE' IN CORRESPONDING ENTRY IN THREAD INDEX, AND SELECTING ONE LEAF DOCUMENT]
    4301 --> 4302[RETRIEVING DOCUMENT WHOSE 'MESSAGE TYPE' FIELD HAS NOT BEEN ENTERED FROM 'PATH TO ROOT' CONTAINING SELECTED DOCUMENT]
    4302 --> 4303{RETRIEVED?}
    4303 -- Yes --> 4304{IS THERE Question PATTERN IN}
    4303 -- No --> 4301
    4304 -- No --> 4301
    4304 -- Yes --> 4305{IS DOCUMENT ID OF SAME AUTHOR ENTERED IN Thanks ITEM IN QA INDEX?}
    4305 -- No --> 4307[INCREMENTING VALUE OF QA_ID BY 1, AND ENTERING PROCESS DOCUMENT ID IN Question ITEM  
- ADDING Q TO 'MESSAGE TYPE' FIELD IN DOCUMENT INDEX]
    4305 -- Yes --> 4306[ENTERING PROCESS DOCUMENT ID IN Question ITEM ADDING Q TO ITEMS OF MESSAGE TYPE OF DOCUMENT INDEX  
- ENTERING DOCUMENT ID STRING IN 'Answer' FIELD ADDING A TO 'MESSAGE TYPE' FIELD IN DOCUMENT INDEX]
    4307 --> 4308{IS THERE Thanks PATTERN IN DOCUMENT?}
    4306 --> 4308
    4308 -- No --> 4301
    4308 -- Yes --> 4309{IS DOCUMENT ID OF SAME AUTHOR ENTERED IN Question ITEM IN QA INDEX?}
    4309 -- No --> 4311[INCREMENTING VALUE OF QA_ID BY 1, AND ENTERING PROCESS DOCUMENT ID IN Thanks ITEM  
- ADDING T TO 'MESSAGE TYPE' FIELD IN DOCUMENT INDEX]
    4309 -- Yes --> 4310[ENTERING PROCESS DOCUMENT ID IN Thanks ITEM ADDING T TO MESSAGE TYPE ITEM IN DOCUMENT INDEX  
- ENTERING DOCUMENT ID STRING IN Answer ITEM ADDING A TO MESSAGE TYPE ITEM IN DOCUMENT INDEX]
    4311 --> 4312{HAVE ALL LEAF DOCUMENTS BEEN TRIED?}
    4310 --> 4312
    4312 -- Yes --> End(( ))
    4312 -- No --> 4301
  
```

FIG. 43

- IS IT ...?
- DOES IT ...?
- TELL ME ...
- PLEASE ...
- MAY I ...?
- I WOULD LIKE TO ...
- QUESTION

FIG. 44

869260" 92084050

- THANK YOU VERY MUCH.
- THANKS A LOT.
- I APPRECIATE ...
- I SEE ...

FIG. 45

Coment Link Title: [CAN LIGHT CAR PULL TRAILER?]

HA[20]=+IWA[35]==HA[22]==[35].
++[67]==*[37].
++[16]==*[26].

F I G. 4 6

```

-----
00001/00530 AAA00001 Q-person making use of e-mail
( 8) 96/09/22 12:29 comments: 1

I want to use e-mail. But I'm beginner, so I don't know how to use.
What can I do for the beginning.
Any coments, please!!

-----
00002/00530 BBB00002 A-person Re:making use of e-mail
( 8 ) 96/10/02 09:34 comment_to_00002 comnets: 1

Hi, Q-person, how do you do. Well, will you check "e-mail message board"
in beginners forum at first. It contains a lot of useful information.

-----
00007/00530 AAA00001 Q-person Re:making use of e-mail
( 8) 96/10/02 10:19 comment_to_00002

Hello,A-person.
I've cheked "e-mail message board" in beginners forum.
I could send e-mail to my friend.
Thank you very much.
-----

```

FIG. 47

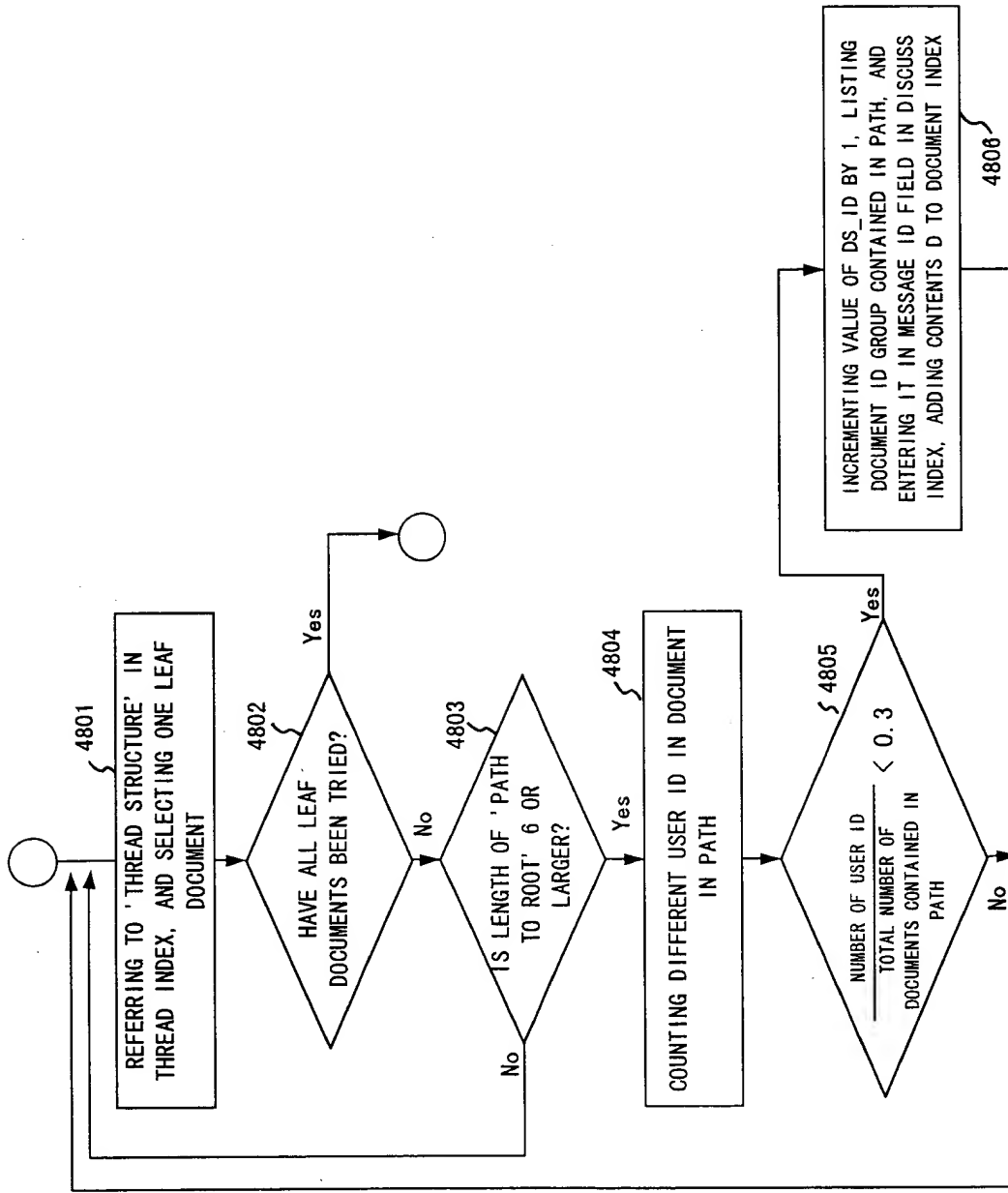


FIG. 48

Coment Link Title: [YEN SOARED?]

*H[13]==S[24]==U[46]==H[24]==U[38]==H[32]==U[61]==H[17].
+H[49].
+H[25]==U[46]==H[17].

F I G. 49

```

graph TD
    Start(( )) --> 5001[RETRIEVING LEAF DOCUMENT BY REFERRING TO 'THREAD STRUCTURE' IN TREAD INDEX]
    5001 --> 5002{HAVE ALL LEAF DOCUMENTS BEEN TRIED?}
    5002 -- Yes --> End(( ))
    5002 -- No --> 5003{IS LENGTH OF 'PATH TO ROOT' 6 OR LARGER?}
    5003 -- No --> 5001
    5003 -- Yes --> 5004[COUNTING DIFFERENT USER ID IN DOCUMENT IN PATH]
    5004 --> 5005{NUMBER OF USER ID / TOTAL NUMBER OF DOCUMENTS CONTAINED IN PATH < 0.6}
    5005 -- Yes --> 5006[INCREMENTING VALUE OF DS_ID BY 1, LISTING DOCUMENT ID GROUP CONTAINED IN PATH, AND ENTERING IT IN Chat LIST FIELD OF Chat INDEX]
    5005 -- No --> 5001
    5006 --> 5001

```

FIG. 50

03128: [45: KAZUYOSHI OGAWA] AWAITED AZ-1
03129: [9: KAZUYOSHI OGAWA]
03136: [29: Gaia]
03153: [10: PARTIWIWAL]
03167: [29: Gaia]
03181: [17: PARTIWIWAL]
03182: [24: KAZUYOSHI OGAWA]
03154: [10: PARTIWIWAL]
03184: [10: KAZUYOSHI OGAWA]
03189: [21: EF-3CIVIC]
03201: [23: PARTIWIWAL]
03209: [22: EF-3CIVIC]
03210: [17: KAZUYOSHI OGAWA]
03200: [19: PARTIWIWAL]
03137: [44: VERY MUCH]
03155: [20: PARTIWIWAL]
03183: [27: KAZUYOSHI OGAWA]

869220" 92084060

*0[45]=+0[9]=+G[29]=+PA[10]==G[29]==PA[17]
+0[24].

+PA[10]==0[10]=+EF[21]==PA[23]=+EF[22].
+YA[44]=+PA[20]. +PA[19]. +0[17].
+0[27].

F I G. 53

869220" 92084060

+ 03128: [45: KAZUYOSHI OGAWA] AWAITED AZ-1 (17)
+ 03129: [9: KAZUYOSHI OGAWA] Re: AWAITED AZ-1 (13)
+ 03136: [29: Gaia] OH, LONG-AWAITED AZ-1 CHARACTERS (5)
03154: [10: PARTIWIWAL] Re: AWAITED AZ-1
03184: [10: KAZUYOSHI OGAWA] ALUMI OF 5 AND 5J
+ 03189: [21: EF-3CIVIC] Re: ALUMI OF 5 AND 5J (4)

F I G. 54

869220" 92084060

+ 03128: [45: KAZUYOSHI OGAWA] AWAITED AZ-1
+ 03136: [29: Gaia] OH, LONG-AWAITED AZ-1 CHARACTERS
+ 03184: [10: KAZUYOSHI OGAWA] ALUMI OF 5 AND 5J
03210: [17: KAZUYOSHI OGAWA] TROUBLESOME?
03183: [27: KAZUYOSHI OGAWA] SPRING AND INTERCOOLER

F I G. 55

9692E0" 92084060

10/1	10/2	10/3	10/4	10/5
*0-----	0, G-----	PA, G-----	PA-----	
		+	-----	0
		+PA, 0-----	EF, PA-----	EF

F I G. 56

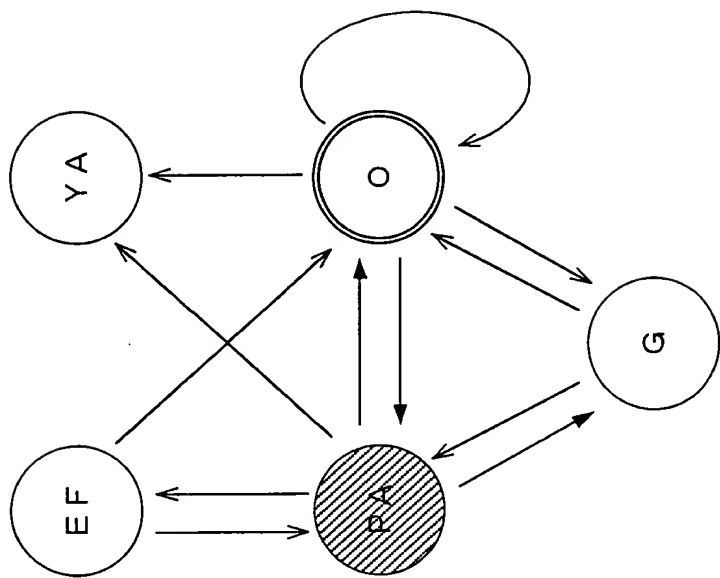


FIG. 57

MESSAGES SATISFYING FOLLOWING CONDITIONS ARE
RETRIEVED FROM MESSAGE BOARD RELATING TO CARS IN XX
NEWS SERVICE.

...IS CONTAINED.

...IS NOT CONTAINED.

TYPE OF TARGET MESSAGE



ALL MESSAGES



Q & A

DATE OF TARGET MESSAGE



ALL



WITHIN ONE MONTH



WITHIN ONE WEEK

SEARCH

LATEST UPDATE 97.10.10 3:10AM

ALL OF 12363 MESSAGES

FIG. 58

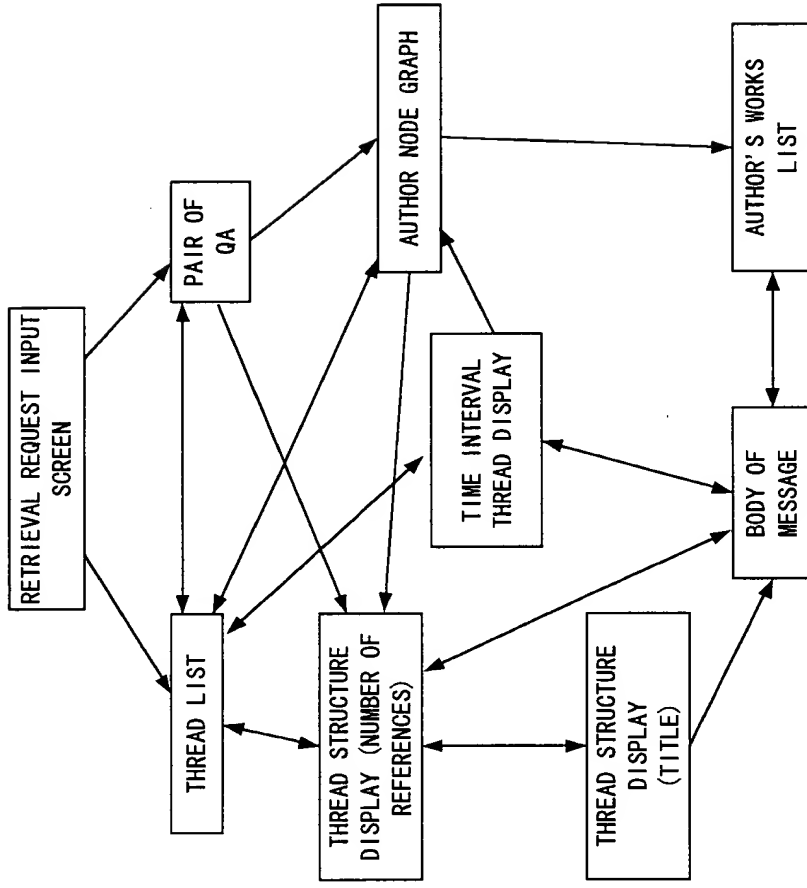


FIG. 59

LISTED BELOW ARE RESULTS OF RETRIEVAL OF 'ENGINE'
FROM MESSAGE BOARD ABOUT CARS.
TOTAL OF 314 MESSAGES HAVE BEEN RETRIEVED.

TOP TEN THREADS ARE DISPLAYED BELOW.

TITLE	AUTHOR	DATE	SIZE	CONTENTS
xxxxxx	yyy	10/3	22 (14KB)	QA, DC
.....				

→ NEXT TEN THREADS

FURTHERMORE, THOSE CONTAINING
... AND NOT CONTAINING... ARE
SELECTED

REFINE

FIG. 60

DISPLAYED BELOW IS STRUCTURE OF THREAD...

('ENGINE' IS BEING RETRIEVED)

+ xxxxx (yyyy) [Q]... 21

Re: xxxxx (uuuuu) [A]

+ Re: xxxxx (yyyy) ... 15

Re: xxxxx (uuuuu)

+ ZZZZZ (VVVV) ... 7

LIST OF TITLES

FURTHERMORE, THOSE
CONTAINING ... AND
NOT CONTAINING ...
ARE SELECTED.

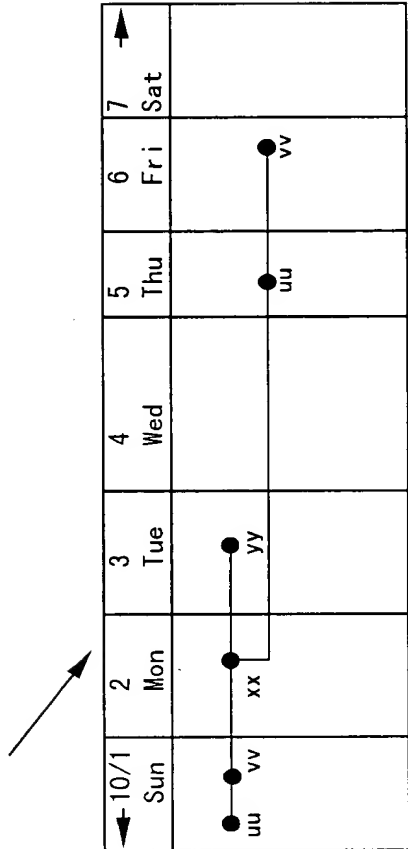
REFINE

FIG. 61

09043026, 032698

92094060

DISPLAY OF TIME INTERVAL THREAD



SCHEDULER						
SUN	MON	TUE	WED	THU	FRI	SAT
	15:00 MEETING		11:30 GROUP MEETING		TRIP	
		PRESS CONFERENCE				

FIG. 62

```
graph TD; Start(( )) --> 6301[REFERRING TO THREAD INDEX, AND  
SELECTING ONE DOCUMENT CONTAINED IN  
THREAD]; 6301 --> 6302[REFERRING TO DATE OF DOCUMENT INDEX  
AND ENTERING IN CALENDAR INDEX]; 6302 --> 6303{HAVE ALL DOCUMENTS  
IN THREAD BEEN  
TRIED?}; 6303 -- No --> 6301; 6303 -- Yes --> 6304[MAPPING DOCUMENT NODES ON CALENDAR  
BY REFERRING TO CALENDAR INDEX.  
REFER TO THREAD INDEX FOR EDGE OF  
REFERENCE FOR DISPLAY.]; 6304 --> End(( ))
```

6301 REFERRING TO THREAD INDEX, AND
SELECTING ONE DOCUMENT CONTAINED IN
THREAD

6302 REFERRING TO DATE OF DOCUMENT INDEX
AND ENTERING IN CALENDAR INDEX

6303 HAVE ALL DOCUMENTS
IN THREAD BEEN
TRIED?

No

Yes

6304 MAPPING DOCUMENT NODES ON CALENDAR
BY REFERRING TO CALENDAR INDEX.
REFER TO THREAD INDEX FOR EDGE OF
REFERENCE FOR DISPLAY.

FIG. 63

869220"92084060

DATE	MESSAGE ID
10/1	001, 002
10/2	003
10/3	004, 005, 006

FIG. 64

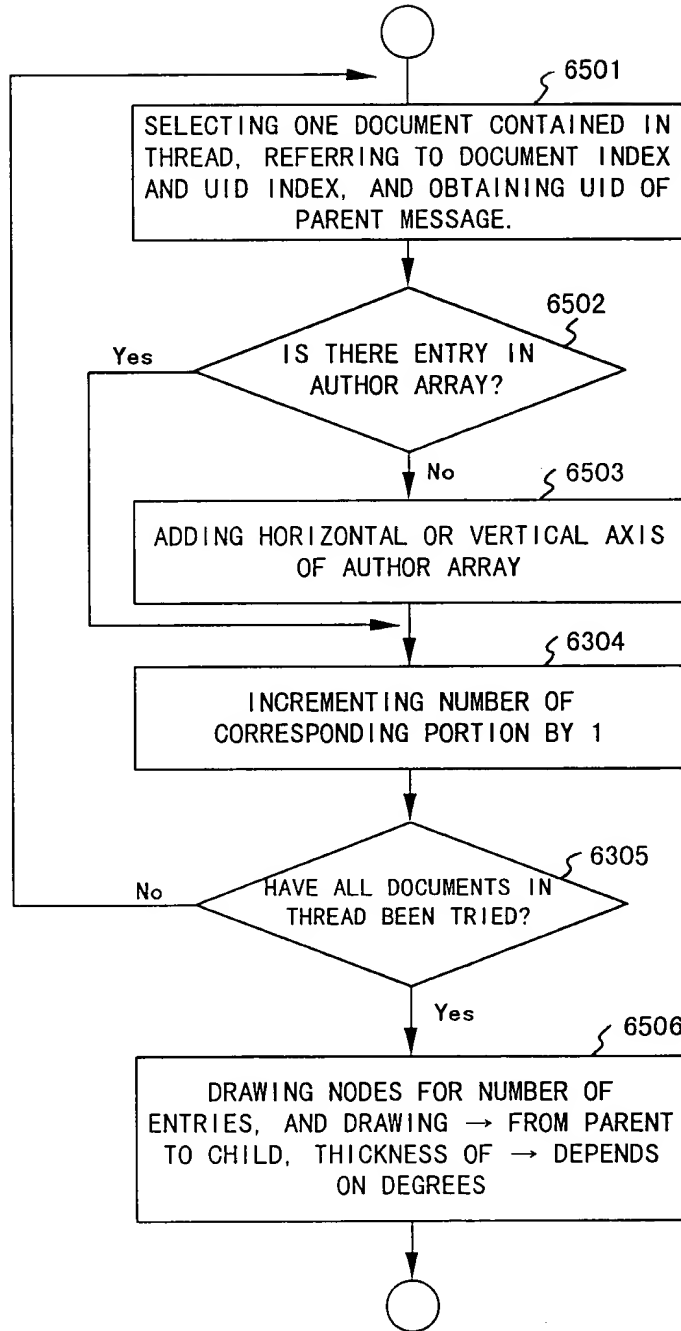


FIG. 65

CHILD MESSAGE	PARENT MESSAGE	AAA	BBB	CCC
AAA		0	5	2
BBB		2	1	1
CCC		0	1	0

FIG. 66

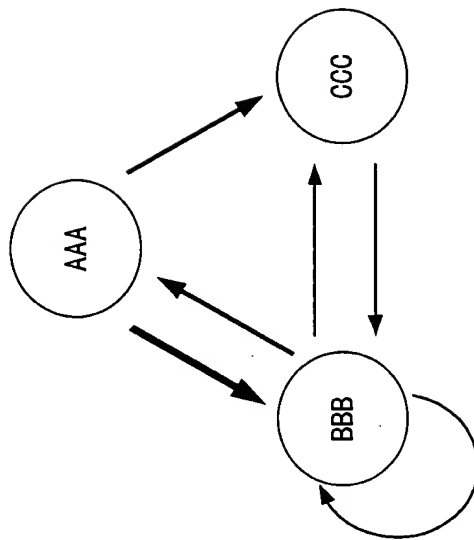


FIG. 67

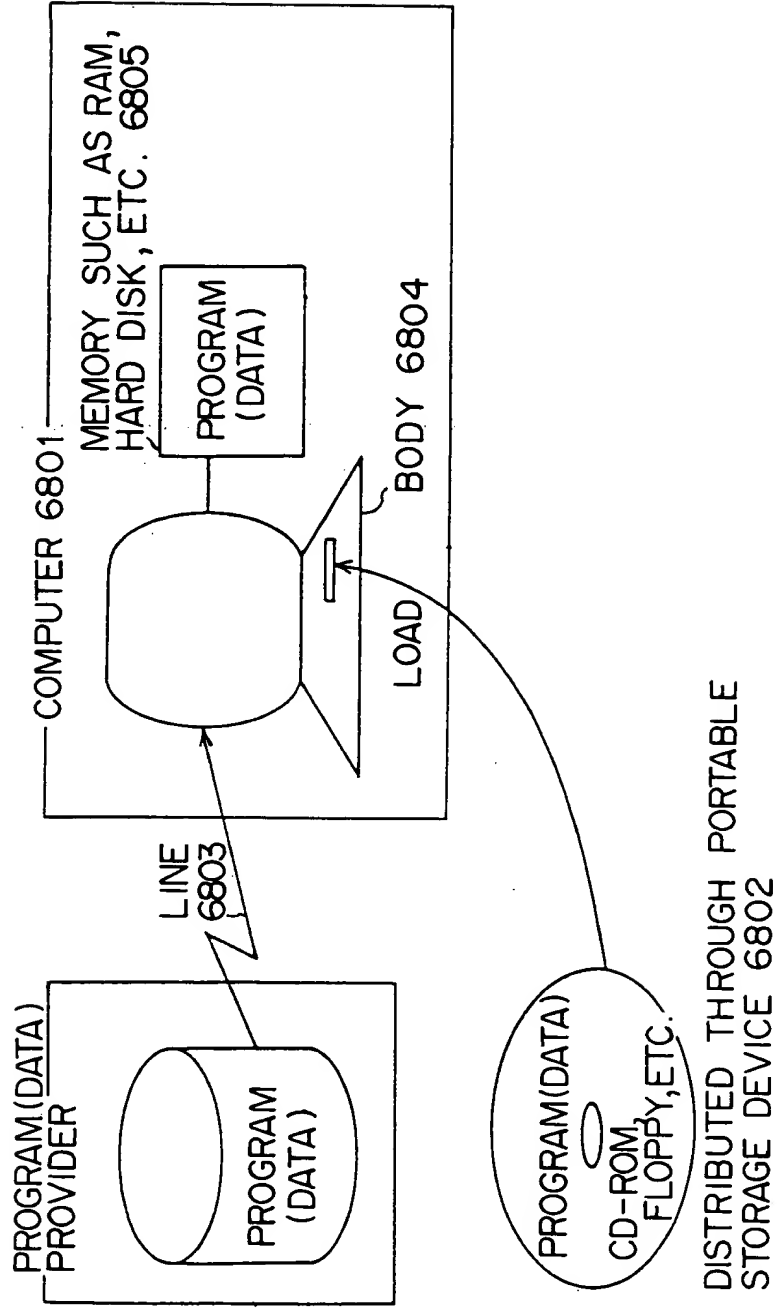


FIG. 68